

IN THE CLAIMS

Please amend claims 10-12 as follows:

10. (Twice amended) A mutant of a naturally occurring second serine/threonine protein kinase or tyrosine protein kinase, said mutant characterized by:

(a) having an ATP binding site comprising at least one amino acid substitution compared to an ATP binding site of the naturally occurring second serine/threonine protein kinase or tyrosine protein kinase; and

(b) having the ability to bind to a compound that binds to an ATP binding site of a first serine/threonine protein kinase or first tyrosine protein kinase, wherein said compound is an inhibitor or a ligand of said first serine/threonine protein kinase or said first tyrosine kinase, said binding of the compound with the mutant having a dissociation constant for said inhibitor (K_i) or a dissociation constant for said ligand (K_d) that is

(i) less than 10 μ M and

(ii) at least 10-fold lower than the K_i or K_d of the binding of said compound with said naturally-occurring second serine/threonine protein kinase or second tyrosine protein kinase.

11. (Twice amended) The mutant second protein kinase according to claim 23, wherein said first and said second protein kinases are mitogen activating protein (MAP) kinases.

12. (Twice amended) The mutant second protein kinase according to claim 11, wherein said mutant second protein kinase is selected from:

(a) a mutant extracellular-signal regulated kinase 2 (ERK2) comprising the amino acid sequence of SEQ ID NO:2, wherein amino acid 105 is threonine or alanine;
or

(b) a mutant Jun-N-terminal kinase 3 (JNK3) comprising amino acids 40-402 of SEQ ID NO:3, wherein amino acid 146 is threonine or alanine.

Please add claim 23:

23. (Added) A mutant of a naturally occurring second serine/threonine protein kinase, said mutant characterized by:

(a) having an ATP binding site comprising at least one amino acid substitution compared to an ATP binding site of the naturally occurring second serine/threonine protein kinase; and

(b) having the ability to bind to a compound that binds to an ATP binding site of a first serine/threonine protein kinase, wherein said compound is an inhibitor or a ligand of said first serine/threonine protein kinase, said binding of the compound with the mutant having a dissociation constant for said inhibitor (K_i) or a dissociation constant for said ligand (K_d) that is

(i) less than 10 μM and

(ii) at least 10-fold lower than the K_i or K_d of the binding of said compound with said naturally-occurring second serine/threonine protein kinase.